Event Handling

1 – Event Handling Basics

1. Which of these packages contains all the classes and methods required for even handling in Java?

a) java.applet

b) java.awt

c) java.event

d) java.awt.event

Answer: d

Explanation: Most of the event to which an applet response is generated by a user. Hence they are in Abstract Window Kit package, java.awt.event.

2. What is an event in delegation event model used by Java programming language?

a) An event is an object that describes a state change in a source

b) An event is an object that describes a state change in processing

c) An event is an object that describes any change by the user and system

d) An event is a class used for defining object, to create events

Answer: a

Explanation: An event is an object that describes a state change in a source.

3. Which of these methods are used to register a keyboard event listener?

a) KeyListener()

b) addKistener()

c) addKeyListener()

d) eventKeyboardListener()

Answer: c

Explanation: None.

4. Which of these methods are used to register a mouse motion listener?

a) addMouse()

b) addMouseListener()

c) addMouseMotionListner()

d) eventMouseMotionListener()

Answer: c

Explanation: None.

5. What is a listener in context to event handling?

a) A listener is a variable that is notified when an event occurs

b) A listener is a object that is notified when an event occurs

c) A listener is a method that is notified when an event occurs

d) None of the mentioned

Answer: b

Explanation: A listener is a object that is notified when an event occurs. It has two major requirements first, it must have been registered with one or more sources to receive notification about specific event types, and secondly it must implement methods to receive and process these notifications.

6. Event class is defined in which of these libraries?

a) java.io

b) java.lang

c) java.net

d) java.awt.event

Answer: d

Explanation: The Event class is part of the java.awt.event package, which provides various event classes for handling events in Java. Even though the Event class exists in Java, it is considered obsolete as of Java 1.1 due to the introduction of more specific and efficient event handling mechanisms.

7. Which of these methods can be used to determine the type of event?

a) getID()

b) getSource()

c) getEvent()

d) getEventObject()

Answer: a

Explanation: getID() can be used to determine the type of an event.

8. Which of these class is super class of all the events?

a) EventObject

b) EventClass

c) ActionEvent

d) ItemEvent

Answer: a

Explanation: EventObject class is a super class of all the events and is defined in java.util package.

9. Which of these events will be notified if scroll bar is manipulated?

a) ActionEvent

b) ComponentEvent

c) AdjustmentEvent

d) WindowEvent

Answer: c

Explanation: AdjustmentEvent is generated when a scroll bar is manipulated.

10. Which of these events will be generated if we close an applet’s window?

a) ActionEvent

b) ComponentEvent

c) AdjustmentEvent

d) WindowEvent

Answer: d

Explanation: WindowEvent is generated when a window is activated, closed, deactivated, deiconfied, iconfied, opened or quit.

2 – ActionEvent & AdjustmentEvent Class

1. Which of these events is generated when a button is pressed?

a) ActionEvent

b) KeyEvent

c) WindowEvent

d) AdjustmentEvent

Answer: a

Explanation: Action event is generated when a button is pressed, a list item is double-clicked or a menu item is selected.

2. Which of these methods can be used to obtain the command name for invoking ActionEvent object?

a) getCommand()

b) getActionCommand()

c) getActionEvent()

d) getActionEventCommand()

Answer: b

Explanation: None.

3. Which of these are integer constants defined in ActionEvent class?

a) ALT\_MASK

b) CTRL\_MASK

c) SHIFT\_MASK

d) All of the mentioned

Answer: d

Explanation: Action event defines 4 integer constants ALT\_MASK, CTRL\_MASK, SHIFT\_MASK and ACTION\_PERFORMED

4. Which of these methods can be used to know which key is pressed?

a) getKey()

b) getModifier()

c) getActionKey()

d) getActionEvent()

Answer: b

Explanation: The getModifiers() methods returns a value that indicates which modifiers keys (ALT, CTRL, META, SHIFT) were pressed when the event was generated.

5. Which of these events is generated by scroll bar?

a) ActionEvent

b) KeyEvent

c) WindowEvent

d) AdjustmentEvent

Answer: d

Explanation: None.

6. Which of these methods can be used to determine the type of adjustment event?

a) getType()

b) getEventType()

c) getAdjustmentType()

d) getEventObjectType()

Answer: c

Explanation: None.

7. Which of these methods can be used to know the degree of adjustment made by the user?

a) getValue()

b) getAdjustmentType()

c) getAdjustmentValue()

d) getAdjustmentAmount()

Answer: a

Explanation: The amount of the adjustment can be obtained from the getvalue() method, it returns an integer value corresponding to the amount of adjustment made.

8. Which of these constant value will change when the button at the end of scroll bar was clicked to increase its value?

a) BLOCK\_DECREMENT

b) BLOCK\_INCREMENT

c) UNIT\_DECREMENT

d) UNIT\_INCREMENT

Answer: d

Explanation: UNIT\_INCREMENT VALUE will change when the button at the end of scroll bar was clicked to increase its value.

3 – ComponentEvent, ContainerEvent & FocusEvent Class

1. Which of these events is generated when the size of an event is changed?

a) ComponentEvent

b) ContainerEvent

c) FocusEvent

d) InputEvent

Answer: a

Explanation: A ComponentEvent is generated when the size, position or visibility of a component is changed.

2. Which of these events is generated when the component is added or removed?

a) ComponentEvent

b) ContainerEvent

c) FocusEvent

d) InputEvent

Answer: b

Explanation: A ContainerEvent is generated when a component is added to or removed from a container. It has two integer constants COMPONENT\_ADDED & COMPONENT\_REMOVED.

3. Which of these methods can be used to obtain the reference to the container that generated a ContainerEvent?

a) getContainer()

b) getContainerCommand()

c) getActionEvent()

d) getContainerEvent()

Answer: d

Explanation: None.

4. Which of these methods can be used to get reference to a component that was removed from a container?

a) getComponent()

b) getchild()

c) getContainerComponent()

d) getComponentChild()

Answer: b

Explanation: The getChild() method returns a reference to the component that was added to or removed from the container.

5. Which of these are integer constants of ComponentEvent class?

a) COMPONENT\_HIDDEN

b) COMPONENT\_MOVED

c) COMPONENT\_RESIZE

d) All of the mentioned

Answer: d

Explanation: The component event class defines 4 constants COMPONENT\_HIDDEN, COMPONENT-MOVED, COMPONENT-RESIZE and COMPONENT-SHOWN.

6. Which of these events is generated when computer gains or loses input focus?

a) ComponentEvent

b) ContainerEvent

c) FocusEvent

d) InputEvent

Answer: c

Explanation: None.

7. FocusEvent is subclass of which of these classes?

a) ComponentEvent

b) ContainerEvent

c) ItemEvent

d) InputEvent

Answer: a

Explanation: None.

8. Which of these methods can be used to know the type of focus change?

a) typeFocus()

b) typeEventFocus()

c) isTemporary()

d) isPermanent()

Answer: c

Explanation: There are two types of focus events – permanent and temporary. The isTemporary() method indicates if this focus change is temporary, it returns a Boolean value.

9. Which of these is superclass of ContainerEvent class?

a) WindowEvent

b) ComponentEvent

c) ItemEvent

d) InputEvent

Answer: b

Explanation: ContainerEvent is superclass of ContainerEvent, FocusEvent, KeyEvent, MouseEvent and WindowEvent.

4 – MouseEvent, TextEvent & WindowEvent Class

1. Which of these events is generated when the window is closed?

a) TextEvent

b) MouseEvent

c) FocusEvent

d) WindowEvent

Answer: d

Explanation: A WindowEvent is generated when a window is opened, close, activated or deactivated.

2. Which of these methods can be used to obtain the coordinates of a mouse?

a) getPoint()

b) getCoordinates()

c) getMouseXY()

d) getMouseCordinates()

Answer: a

Explanation: getPoint() method can be used to obtain coordinates of a mouse, alternatively we can use getX() and getY() methods for x and y coordinates of mouse respectively.

3. Which of these methods can be used to change location of an event?

a) ChangePoint()

b) TranslatePoint()

c) ChangeCordinates()

d) TranslateCordinates()

Answer: b

Explanation: None.

4. Which of these are integer constants of TextEvent class?

a) TEXT\_CHANGED

b) TEXT\_FORMAT\_CHANGED

c) TEXT\_VALUE\_CHANGED

d) TEXT\_sIZE\_CHANGED

Answer: c

Explanation: TextEvent defines a single integer constant TEXT\_VALUE\_CHANGED.

5. Which of these methods is used to obtain the object that generated a WindowEvent?

a) getMethod()

b) getWindow()

c) getWindowEvent()

d) getWindowObject()

Answer: b

Explanation: None.

6. MouseEvent is subclass of which of these classes?

a) ComponentEvent

b) ContainerEvent

c) ItemEvent

d) InputEvent

Answer: d

Explanation: None.

7. Which of these methods is used to get x coordinate of the mouse?

a) getX()

b) getXCoordinate()

c) getCoordinateX()

d) getPointX()

Answer: a

Explanation: getX() and getY() are used to obtain X AND Y coordinates of the mouse.

8. Which of these are constants defined in WindowEvent class?

a) WINDOW\_ACTIVATED

b) WINDOW\_CLOSED

c) WINDOW\_DEICONIFIED

d) All of the mentioned

Answer: d

Explanation: WindowEvent class defines 7 constants – WINDOW\_ACTIVATED, WINDOW\_CLOSED, WINDOW\_OPENED, WINDOW\_DECONIFIED, WINDOW\_CLOSING, WINDOW\_DEACTIVATED, WINDOW\_ICONIFIED.

9. Which of these is superclass of WindowEvent class?

a) WindowEvent

b) ComponentEvent

c) ItemEvent

d) InputEvent

Answer: b

Explanation: ComponentEvent is superclass of ContainerEvent, FocusEvent, KeyEvent, MouseEvent and WindowEvent.

5 – Event Listeners Interfaces

1. Which of these packages contains all the event handling interfaces?

a) java.lang

b) java.awt

c) java.awt.event

d) java.event

Answer: c

Explanation: None.

2. Which of these interfaces handles the event when a component is added to a container?

a) ComponentListener

b) ContainerListener

c) FocusListener

d) InputListener

Answer: b

Explanation: The ContainerListener defines methods to recognize when a component is added to or removed from a container.

3. Which of these interfaces define a method actionPerformed()?

a) ComponentListener

b) ContainerListener

c) ActionListener

d) InputListener

Answer: c

Explanation: ActionListener defines the actionPerformed() method that is invoked when an adjustment event occurs.

4. Which of these interfaces define four methods?

a) ComponentListener

b) ContainerListener

c) ActionListener

d) InputListener

Answer: a

Explanation: ComponentListener defines four methods componentResized(), componentMoved(), componentShown() and componentHidden().

5. Which of these interfaces define a method itemStateChanged()?

a) ComponentListener

b) ContainerListener

c) ActionListener

d) ItemListener

Answer: d

Explanation: None.

6. Which of these methods will respond when you click any button by mouse?

a) mouseClicked()

b) mouseEntered()

c) mousePressed()

d) all of the mentioned

Answer: d

Explanation: when we click a button, first we enter the region of button hence mouseEntered() method responds then we press the button which leads to respond from mouseClicked() and mousePressed().

7. Which of these methods will be invoked if a character is entered?

a) keyPressed()

b) keyReleased()

c) keyTyped()

d) keyEntered()

Answer: c

Explanation: None.

8. Which of these methods is defined in MouseMotionAdapter class?

a) mouseDragged()

b) mousePressed()

c) mouseReleased()

d) mouseClicked()

Answer: a

Explanation: The MouseMotionAdapter class defines 2 methods – mouseDragged() and mouseMoved.

9. Which of these is a superclass of all Adapter classes?

a) Applet

b) ComponentEvent

c) Event

d) InputEvent

Answer: a

Explanation: All Adapter classes extend Applet class.